

Aluminum-boron-phosphate enamels ...

26194  
S/081/61/000/012/020/028  
B110/B216

oxidation or dull pickling with a mixture of  $\text{HNO}_3$  and  $\text{H}_2\text{SO}_4$  proved most suitable. Satisfactory damping of the enamels was attained by using  $\text{NaNO}_2$  as grinding additive in combination with damping agents.  $\text{Cr}_2\text{O}_3$ ,  $\text{Fe}_2\text{O}_3$ ,  $\text{Co}_2\text{O}_3$ ,  $\text{CuO}$  and other pigments were added for the preparation of colored enamels. The enamels were baked at  $480\text{--}540^\circ\text{C}$  for 3-5 min. The thermal expansion coefficient of the enamels was  $133\text{--}185 \cdot 10^{-7}$ . The studies showed that titanium enamels have the greatest wetting angle, while addition of  $\text{ZnO}$  or  $\text{Sb}_2\text{O}_3$  improved the wetting properties. Phosphate enamels are resistant to water and acids.  $\text{ZnO}$  and  $\text{CaO}$  increase the resistance of the enamels to alkali. [Abstracter's note: Complete translation.]

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15 2140

28034

S/081/61/000/015/095/139

B104/B110

AUTHORS: Bezborodov, M. A., Rzhnevskaya, T. L.

TITLE: Enamels for aluminum on the basis of lithium-containing glasses

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 15, 1961, 371, abstract 15K318 (Sb. nauchn. rabot. In-t obshch. i neorgan. khimii AN BSSR, no. I, 1960, 112-119)

TEXT: The system  $\text{Li}_2\text{O}-\text{Na}_2\text{O}-\text{PbO}-\text{SiO}_2$  in the vitreous state was examined for its suitability as a base material for enamels on aluminum. The glass was synthesized in three sections of the system with 10, 15, and 20 mole% of  $\text{Na}_2\text{O}$ . The coefficient of thermal expansion of the glasses, the chemical stability, and the softening temperature were determined. Glass of the following composition proved to be the best suited (in mole%):  $\text{Li}_2\text{O}=5$ ,  $\text{Na}_2\text{O}=20$ ,  $\text{PbO}=20$ ,  $\text{SiO}_2=55$ . The coefficient of thermal expansion was  $157 \cdot 10^{-7}$ , the loss of weight in the determination of the resistance to

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Enamels for aluminum on the basis of...

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water was 0.32%, the softening temperature was 390°C, and the boiling temperature was 1150°C.  $\text{KNO}_3$ , which was added to the batch in amounts of

0.1 - 0.15%, proved to be the optimum oxidizer for the enamels concerned.  
[Abstracter's note: Complete translation.]

Card 2/2

BEZBORODOV, Mikhail Alekseyevich, prof. (Minsk); MARINOV, M.

On the contents of ancient Bulgarian glass from Pliska and Preslav,  
from the 9-13 centuries. Izv Inst khim BAN 7:13-25 '60.  
(EEAI 10:9)

1. Zavezhdasht Katedra po stuklo v Belorusskii politekhnicheskii  
institut (for Bezborodov).

(Glass)

S/081/60/000/024/006/016  
A005/A001

Translation from: Referativnyy zhurnal, Khimiya, 1960, No. 24, p. 347, # 97335

AUTHORS: Bezborodov, M.A., Kripskiy, A.M.

TITLE: Methods for Investigating the Glass Crystalline Structure

PERIODICAL: Sb. nauchn. tr. Belorussk. politekhn. in-t, 1960, No.82, pp. 3-15

TEXT: The authors enumerate and describe briefly the direct and indirect methods, both in application and being suggested, which are suitable in principle for the investigation of the structural changes in glasses.

I. Mikhaylova ✓

Translator's note: This is the full translation of the original Russian abstract.

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S/081/60/000/024/007/016  
A005/A001

Translation from: Referativnyy zhurnal, Khimiya, 1960, No. 24, p. 349, # 97363

AUTHORS: Bezborodov, M.A., Mazelev, L.Ya.

TITLE: The Development of a Prescription for Boronfree Glasses for Water- and Petroleum Gage Tubings and Their Test

PERIODICAL: Sb.nauchn.tr. Belorussk.politekhn. in-t, 1960, No.82, pp. 24-28

TEXT: The plant "Druzhnaya Gorka" organized, on the basis of results from technological and physicochemical tests of experimental glasses, the production of water- and petroleum gage tubings of boronfree glass IV of the following composition (in % of weight)  $\text{SiO}_2$  71.00,  $\text{Al}_2\text{O}_3$  5.00,  $\text{BaO}$  2.00,  $\text{CaO}$  7.00,  $\text{MgO}$  4.00,  $\text{Na}_2\text{O}$  11.0. The glasses I, II, III and IV (the compositions are given in a table) are recommended for the mechanized manufacture of glass-containers with raised thermal and chemical stability and mechanical strength, of chemical-laboratory neutral glass, and some sorts of electrotechnical and electric insulation glass. ✓

I. Mikhaylova

Translator's note: This is the full translation of the original Russian abstract.

Card 1/1

BEZBORODOV, M.A., akademik; YERMOLENKO, N.N., kand.tekhn.nauk

Synthesis and formation of glasses in a  $\text{CaO} - \text{PbO} - \text{Al}_2\text{O}_3$   
system. Sbor. nauch. trud. Bel. politekh. inst.  
no.82:16-23 '66. (MIRA 15:5)

1. Akademiya nauk BSSR (for Bezborodov).  
(Glass manufacture--Chemistry)

BEZBORODOV, M.A., akademik; YERMOLENKO, N.N., ~~kand.~~ tekhn. nauk;  
ZHUNINA, L.A., kand. tekhn. nauk; NOVIKOV, Ye.Z., inzh.

Light refraction and crystallizing capacity of glasses distributed  
in some sections of the system  $\text{Na}_2\text{O} - \text{CaO} - \text{BaO} - \text{ZrO}_2 - \text{SiO}_2$ .  
Sbor. nauch. trud. Bel. politekh. inst. no. 82:29-33 '60.

(Glass research)

(Systems (Chemistry))

(MIRA 15:5)

BEZBORODOV, M.A., akademik; YERMOLENKO, N.N., kand.tekhn.nauk;  
Prinimali uchastiye: KOZHUKH, V.Ye.; AKULICH, S.S.

Glasses for penicillin flasks. Sbor. nauch. trud. Bel.  
politekh. inst. no.82:34-37 '60. (MIRA 15:5)

1. Akademiya nauk BSSR (for Bezborodov).  
(Glass containers)  
(Penicillin)

BEZBORODOV, M.A.; KHODSKIY, L.G.

Glasses of the system  $K_2O - PbO - Al_2O_3 - B_2O_3 - P_2O_5$  as a base for  
enamels on aluminum. Dokl.AN BSSR 4 no.3:116-119 Mr '60.

(Glass)

(Enamels and enameling)

(MIRA 13:6)

HEZBOBODOV, M.A.; MAZURENKO, V.D.

Some properties of  $\text{Li}_2\text{O} - \text{BaO} - \text{SiO}_2$  glass. Dokl. AN BSSR  
4 no.2:58-61 F '60. (MIRA 13:6)  
(Glass)

BEZBORODOW, M.A. [Bezborodov, M.A.] prof.

Examination of glasses made of low-melting materials. Epitoanyag 12  
no.8:298-300 Ag '60.

1. Belorusz Szovjet Szocialista Koztarsasag Tudomanyos Akademia-  
janak tagja.

BEZBORODOV, M.A., akademik

Identification of glass stones and detection of cords in glass.  
Stek. i ker. 17 no.10:11-17 '60. (MIRA 13:10)

1. An BSSR.  
(Glass manufacture)

89937

15.2120

S/030/61/000/001/006/017  
B105/B206

AUTHORS: Bezborodov, M. A., Academician AS BSSR, Kripskiy, A. M.

TITLE: Ways of producing super-strength unbreakable glass

PERIODICAL: Vestnik Akademii nauk SSSR, no. 1, 1961, 65-69

TEXT: Conclusions may be drawn on the degree of unbreakability of a material from its brittleness, the estimation of which is however very complicated. For reasons of simplicity it is proposed to consider the

value  $\chi_p = \frac{1}{\delta_p^{\max}} = \frac{l_0}{l_p^{\max}}$  as coefficient of brittleness,  $\delta_p$  being the

maximum relative deformation at the moment before breaking,  $l_0$  the initial and  $l_p^{\max}$  the final dimensions of the deformed sample. The

dimensions  $\delta_p^{\max}$  and the values  $\chi_p$  of some materials calculated there-

from are tabulated. Materials with  $\delta_p^{\max} \geq 0.05$  (and  $\chi_p \leq 20$

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Ways of producing super-strength ...

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correspondingly) may be assumed as being unbreakable. Glass may be considered as being practically unbreakable if its resistance to static, dynamic and impact loads under normal conditions is not inferior to that of carbon steel. The strength properties of solids depend on the percentage of weak spots and their distribution in the sample volume. Most dangerous are gap-like cavities and cracks with sharp edges lying vertically to the tensile forces. The durability of solids with structural microdefects is mainly determined by the quantity and character of these microdefects as well as partially by the plasticity of the material, but not by the durability of the main compounds. It follows therefrom that all materials would have a hundred times bigger tensile strength and hundred times lower brittleness and greater elasticity, if all microdefects were eliminated. Even a partial reduction of the amount of cracks through pickling increases the strength of glass and other materials by a multiple. The nature and mechanism of the development of microdefects has not been studied yet. The authors assume that there are three types of microdefects in the glass: 1) microcracks developing in the mass of the sample and on its surface owing to local changes of the glass density; 2) microcracks

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Ways of producing super-strength ...

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B105/B206

developing on the sample surface as a result of chemical and corrosion effects of adsorbed liquids, vapors and gases; 3) microdefects developing during the deformation process of the sample at the destruction of gap-like submolecular sections, which are localized inside and at the surface of the glass by admixtures with weak bonds, as well as microsections with greatly weakened structure. Microdefects develop not only on the surface of the glass, but also inside. The following macrodefects have also an effect on the durability: macrocracks, cavities, gas bubbles, solid inclusions, stresses and chemical heterogeneity. Super-strength unbreakable glass could be produced by a special technology of melting and processing. The liquid glass must be submitted to a pressure of several  $\text{kg/cm}^2$  and cooled under pressure. The formation of crystal nuclei could be suppressed by intense  $\gamma$ -irradiation. The effect of microdefects may be reduced by increasing the plasticity of the glasses (malleable glasses). The microdefects of the structure form a common fault of all materials, mainly metals, alloys, minerals, ceramics, and plastics. Their elimination is the only effective way in the fight for increasing the durability of materials. There are 1 table and 6 references: 2 Soviet-bloc and 3 non-Soviet-bloc.

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S/030/61/000/001/006/017  
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Ways of producing super-strength ...

Legend: Table. Limits of relative deformation and brittleness values of some materials. a) material, 1) glass rods, 2) glass fibers, 3) pure zinc, 4) industrial zinc, 5) pure aluminum, 6) pure iron, 7) industrial lead, 8) organic glass, 9) celluloid, 10) vinyl plastic, 11) soft rubber, 12) hard rubber.

Материалы	$\delta_{\text{max}}$ $\rho$	$\tau_{\text{p}}$
А Стекланные палочки	0,0008—0,001	1250—1000
Б Стекланные нити	0,05	20
В Цинк чистый	0,02	50
Г Цинк технический	0,19	5
Д Алюминий чистый	0,5	2
Е Железо чистое	0,36—0,46	2,8—2,2
Ж Свинец технический	0,32	3,1
З Органическое стекло	0,04	25
И Целлулоид	0,08—0,22	12,5—4,5
К Винилпласт	0,1—0,5	10—2
Л Резина мягкая	2—8	0,5—0,125
М Резина жесткая	3—6	0,33—0,17

Card 4/4

22754

15.2120 1142, 1145

P/015/61/000/006/001/002  
D003/D101

AUTHORS: Bezborodov, M. A., Mazurenko, V. D. (Minsk)

TITLE: Synthesis and tests on the properties of LiBaSiO glass types

PERIODICAL: Szkło i ceramika, no. 6, 1961, 161-164

TEXT: The article is a review of several years research done by the authors on the properties of  $\text{Li}_2\text{O}-\text{BaO}-\text{SiO}_2$  type glass. Some of the results appeared in Soviet publications (Ref. 2: O nekotorykh svoystvakh stekol  $\text{Li}_2\text{O}-\text{BaO}-\text{SiO}_2$  [On some properties of  $\text{Li}_2\text{O}-\text{BaO}-\text{SiO}_2$  glass types]). Doklady AN BSSR, Minsk, 1960, vol. IV, no. 2, 58 - 61). The charges for experimental Li-Ba glass making consisted of refined quartz sand and chemically pure salts  $\text{Li}_2\text{CO}_3$  and  $\text{BaCO}_3$ . The charges were melted at 1,150 - 1,440°C in ceramic crucibles. The chemical composition (in % mol) of the tested glass varied between 5 - 45%  $\text{Li}_2\text{O}$ , 5 - 65% BaO and 30 - 75%  $\text{SiO}_2$ . Satisfactory melting and manufacturing properties were established for a glass composition within 5 - 45%  $\text{Li}_2\text{O}$ , 5 - 55% BaO and 30 - 65%  $\text{SiO}_2$ . A  $\text{SiO}_2$  content

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P/015/61/000/006/001/002  
D003/D101

Synthesis and tests on the ...

of 65% or more causes a high tendency of crystallization. The linear coefficient of thermal expansion of the tested glass types varies within  $(120-170) \cdot 10^{-7}$ . The coefficient depends on the  $\text{Li}_2\text{O}$  and  $\text{SiO}_2$  content, while the effect of  $\text{BaO}$  is not perceptible. The softening point depends mainly on the quantitative ratio  $\text{Li}_2\text{O}:\text{SiO}_2$  and varies within  $550-630^\circ\text{C}$ ; the higher the ratio, the lower the softening point of the glass. The refractive index varies within the range of 1.580-1.720. Lithium oxide has no substantial effect on the refractive index, while the index grows with a higher  $\text{BaO}$  and lower  $\text{SiO}_2$  content. The tested glass types showed a satisfactory chemical resistance to water which depends on the quantitative ratio  $\text{Li}_2\text{O}:\text{SiO}_2$  and decreases with higher ratio. Resistance to a 2n solution of  $\text{Na}_2\text{CO}_3$  is poorer and decreases with a higher  $\text{BaO}:\text{SiO}_2$  ratio. Hydrochloric acid dissolves the glass completely and turns it into gel. There are 7 figures and 10 references: 8 Soviet-bloc and 2 non-Soviet-bloc. The references to the English-language publications read as follows: Urnes, S., Electrical conductivity in molten alkali

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P/015/61/000/006/001/002  
D003/D101

Synthesis and tests on the ...

silicates, "The Glass Industry", 1959, no. 5, 297-299 and Shartsis,  
L., Spinner, S., Capps, W., J. Amer. Ceram. Soc., 1952, 35, 4.

Card 3/3

X

34410

S/081/62/000/002/070/10  
B150/B101

15.2125

AUTHORS: ~~Bezborodov, M. A.~~, Mazo, E. E., Iodo, S. S., Orlova V. M.,  
Volchek, L. K., Volkodotov, A. F.

TITLE: Synthesis of glasses for glass fiber in the system  $\text{SrCaAlSiO}$

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 2, 1962, 378, abstract  
2K241 (Dokl. AN BSSR, v. 5, no. 7, 1961, 304 - 307)

TEXT: The field of vitrification was studied and developed in the system  $\text{SrCaAlSiO}$  considered as a triangle in the angles of which are situated  $\text{Al}_2\text{O}_3$ ,  $\text{SiO}_2$  and  $\text{SrO} + \text{CaO}$  in definite proportions. Three variants of the system were investigated with the ratios  $\text{CaO}:\text{SrO}$  (in mole %) equalling 10; 1.23, and 1.85. It was established that glasses of the  $\text{SrCaAlSiO}$  system are suitable for the production of glass fiber. [Abstracter's note: Complete translation.] ✓

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S/153/61/004/002/003/003  
E073/E535

AUTHORS: Bezborodov, M. A. and Mazurenko, V. D.  
TITLE: On Certain Properties of Glasses of the System  
 $\text{Li}_2\text{O}-\text{BaO}-\text{SiO}_2$   
PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy SSSR, Khimiya  
i khimicheskaya tekhnologiya, 1961, Vol.4, No.2,  
pp.261-264

TEXT: Lithium oxide is of great interest from the point of view of glass production. Some data on the application of lithium and its compounds in glass manufacture are given in the book "Investigation of the system  $\text{Li}_2\text{O}-\text{Al}_2\text{O}_3-\text{B}_2\text{O}_3-\text{SiO}_2$  in the Glassy State" by V. A. Ulazovskiy and one of the authors (Ref.1: Izd. BGU, Minsk, 1957). The increased interest in lithium is due to a number of particular properties of its ions; the lithium ion has a strong densifying influence on the glass structure due to its easy penetration into the interstitial gaps without disturbing the structure. K. Kühne (Ref.2: Silikattechnik, No.11, 451, 1956) believes that it is due to this cause that curves of the properties of lithium glass as a function of the lithium oxide content comply with a linear relation. The high  
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On Certain Properties of Glasses... S/153/61/004/002/003/003  
E073/E535

field strength of the lithium ion which brings about a compression of the glasses also leads to a tendency to devitrification in lithium silicate glasses. These properties of the lithium ion manifest themselves in a strong fluxing effect, reduction of the viscosity and an extension of the range of glass formation on introducing lithium. The work described in this paper was devoted to the study of the system  $\text{Li}_2\text{O}-\text{BaO}-\text{SiO}_2$  and is a continuation of earlier investigations of lithium-containing glassy systems carried out at the Chair of Glass and Silicate Technology of the Byelorussian Polytechnical Institute for the purpose of producing special purpose glasses. The phase diagram of this system was published by A. Dietzel, H. Wickert, N. Köppen (Ref.3: Glastechn., Ber., 5, 27, 1954). The authors synthesized lithium-barium silicate glasses and studied the range of the glassy state in the above system for compositions (in mol %) with 5-45%  $\text{Li}_2\text{O}$ , 5-65%  $\text{BaO}$ , 30-75%  $\text{SiO}_2$ . It was established that for glasses with compositions corresponding to 5-45%  $\text{Li}_2\text{O}$ , 5-55%  $\text{BaO}$  and 30-65%  $\text{SiO}_2$  satisfactory production and fabrication properties are obtained. Glasses containing 65%  $\text{SiO}_2$  and more

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On Certain Properties of Glasses ... S/153/61/004/002/003/003  
E073/E535

show a strong tendency to crystallization; such glasses crystallize during forming. The least tendency to crystallization was observed for glass containing 30 to 35%  $\text{SiO}_2$ . The coefficient of thermal expansion varied between  $106 \times 10^{-7}$  and  $183 \times 10^{-7}$ .  $\text{Li}_2\text{O}$  and  $\text{SiO}_2$  have a considerable influence on the coefficient of expansion of glass, whilst the influence of  $\text{BaO}$  is insignificant. The initial softening temperature of the glasses depends primarily on the  $\text{Li}_2\text{O}:\text{SiO}_2$  ratio; the higher this ratio the lower the softening temperature, which is little influenced by the  $\text{BaO}:\text{SiO}_2$  ratio. The refractive index for the range of compositions studied was within the limits of 1.572 to 1.729.  $\text{Li}_2\text{O}$  did not produce any drastic change in the refractive index. The value of the index is due primarily to the  $\text{BaO}$  and  $\text{SiO}_2$  contents; it increases with increasing  $\text{BaO}$  and decreasing  $\text{SiO}_2$  contents. There are 4 figures and 4 references: 2 Soviet and 2 Non-Soviet.

ASSOCIATION: Kafedra tekhnologii stekla i silikatov, Belorusskiy  
politekhniicheskiy institut im. I. V. Stalina  
Card 3/3 (Department of Glass and Silicate Technology,  
SUBMITTED: Byelorussian Polytechnical Institute imeni I.V.Stalin)  
September 2, 1959

ABDURAZAKOV, A.A.; BEZBORODOV, M.A., akademik; ZADNEPROVSKIY, Yu.A.;  
EYDEL'MAN, A.S., red.; GOR'KOVAYA, Z.P., tekhn. red.

[Glassmaking in Central Asia in ancient times and the medieval  
ages] Steklodelie Srednei Azii v drevnosti i srednevekov'ie.  
Tashkent, Izd-vo AN UzSSR, 1963. 239 p. (MIRA 17:3)

1. Akademiya nauk BSSR (for Bezborodov).

BEZBORODOV, M.A., akademik (Leningrad)

Ceramics, glass and cement; prospects for the chemistry of silicates.  
Priroda 54 no.7:35-40 J1 '65. (MIRA 18:7)

1. AN BSSR.

BEZBORODOV, M.A.

Synthesis and microheterogeneity of silicate glasses.  
Dokl. AN BSSR 9 no.12:813-816 D '65.

1. Institut obshchey i neorganicheskoy khimii AN BSSR. (MIRA 19:1)

BEZBORODOV, N.V.

BEZBORODOV, N.V.; STEPANENKO, I.P.

Single-channel amplitude analyzers with increased discrimination.  
Zbor. nauch. rab. MIFI no.12:92-103 '57. (MLRA 10:11)  
(Electronic instruments)

BEZBORODOV, M.A. [Bezbarodau, M.A.]; MAZO, F.E.; KAMINSKAYA, V.S.

Certain factors affecting the adhesion of enamels to aluminum.

Vestsi AN BSSR. Ser. fiz.-tekh. nav. no.3:54-57 '62.

(MIRA 18:3)

L 26509-66 EWT(m)/EWP(e) WH

ACC NR: AP6011531

(N)

SOURCE CODE: UR/0250/66/010/003/0162/0165

AUTHORS: Bezborodov, M. A.; Kashpar, N. A.

45  
B

ORG: Belorussian Polytechnic Institute (Belorusskiy politekhnicheskiy institut)

TITLE: Some properties of glasses in the system  $\text{Li}_2\text{O}-\text{SrO}-\text{Al}_2\text{O}_3-\text{SiO}_2$

15

SOURCE: AN BSSR. Doklady, v. 10, no. 3, 1966, 162-165

TOPIC TAGS: strontium, glass, glass property, silicate glass, lithium glass, crystallization, specific density, thermal expansion

ABSTRACT: The main purpose of the investigation was to determine the effect of strontium on the glass. The synthesis and the measurement of the physical and chemical parameters are briefly described. The vitrification region was investigated for glasses with composition  $\text{Li}_2\text{O}-\text{SrO}-\text{SiO}_2$ ,  $\text{SrO}-\text{Al}_2\text{O}_3-\text{SiO}_2$ ,  $\text{Li}_2\text{O}-\text{SrO}-\text{Al}_2\text{O}_3$ , and  $\text{Li}_2\text{O}-\text{SrO}-\text{Al}_2\text{O}_3-\text{SiO}_2$ . The results are summarized in the table. Orig. art. has: 2 figures and 1 table.

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L 26509-66

ACC NR: AP6011531

TABLE

Properties of  $\text{Li}_2\text{O}-\text{SrO}-\text{Al}_2\text{O}_3-\text{SiO}_2$  glasses.

Содержание $\text{Al}_2\text{O}_3$ , мол. % 1	Температура размягчения, °C 2	Тепловое расширение, $\alpha \times 10^7$ 3	Температура кристаллизации, °C		Удельный вес 6
			нижний предел 4	верхний предел 5	
0	452—645	93—120	480—740	950—1300	2,53—3,36
5	463—672	72—119	600—790	950—1180	2,53—3,34
10	461—705	63—115	580—860	900—1300	2,55—3,41
15	509—718	65—107	590—810	940—1300	2,56—3,46
20	574—756	72—102	630—780	1110—1300	2,57—3,35
25	621—725	80—87	700—820	1280—1300	2,83—3,11
30	665—755	75—82	770—820	1300	2,92—3,17

- 1)  $\text{Al}_2\text{O}_3$  content, mol.% 2) Softening temperature, deg. C  
 3) Thermal expansion,  $\alpha \times 10^7$  4) Lower limit 5) Upper limit  
 4 -- 5) Crystallization temperature, deg. C 6) Specific gravity.

SUB CODE: 11, 20/ SUBM DATE: 07Jul65/ ORIG REF: 007/ OTH REF: 002

Card

2/2

CC

KONYUKHOV, I.A.; KRYMGOL'TS, G.Ya.; BEZBORODOV, R.S.

Stratigraphy of middle Jurassic deposits of Daghestan. Uch.zap.  
Len.un. no.209:3-30 '56. (MLRA 9:8)  
(Daghestan--Geology, Stratigraphic)

BEZBORODOV, R. S.: Master Geolog-Mineralo Sci (diss) -- "The lithology and facies of the Upper Liassic and Middle Jurassic deposits of the middle portion of the northern Caucasus in connection with the outlook for finding oil and gas". Moscow, 1958. 18 pp (Chair of Geology and Geo-Chemistry of Mineral Fuels of the Moscow State U in M. V. Lomonosov, Complex Southern Geological Expedition of the Acad Sci USSR), 110 copies (KL, No 6, 1959, 127)

MITIN, N.Ye.; HEZBORODOV, R.S.

Deposition and oil and gas potentials of Jurassic sediments in  
the Barakaevskoy field. Geol. nefti 2 no.11:6-12 N 158.

(MIRA 11:12)

1. Krasnodarskiy sovnarkhoz, nefterasvedka No.1.  
(Caucasus, Northern--Petroleum geology)  
(Caucasus, Northern--Gas, Natural--Geology)

BEZBORODOV, R.S.

Oil and gas potentials of Jurassic sediments in Ciscaucasia.  
Izv. vys. ucheb. zav.; neft i gaz no.8:3-9 '58. (MIRA 11:10)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova.  
(Caucasus, Northern--Petroleum geology)  
(Caucasus, Northern--Gas, Natural--Geology)

AUTHOR: Bezborodov, R.S.

SOV/11-58-11-11/14

TITLE: The Peculiarities of the Structure of the Southern Edge of the Belomechetskaya Syncline in the Northern Caucasus  
(Ob osobennostyakh stroeniya yuzhnogo borta belomechetskoy sinklinali na Severnom Kavkaze)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geologicheskaya, 1958, Nr 11, pp 118 - 122 (USSR)

ABSTRACT: The study of core samples and of the diagrams of bore holes drilled in the region of the southern edge of the Belomechetskaya syncline (North Caucasus) showed that this region was subjected to repeated sinkings in the Lower- and Middle-Jurassic periods and that its steep southern edge borders on a tectonic seam, along which movements occurred up to the Upper-Jurassic period. The whole North-Caucasian depression was composed in the Liassic and Middle-Jurassic times of two independent, northern and southern depressions; the Belomechetskaya syncline formed the northern depression. Both de-

Card 1/2

SOV/11-58-11-11/14  
The Peculiarities of the Structure of the Southern Edge of the Belome-  
chetskaya Syncline in the Northern Caucasus

pressions were divided by an anticlinal elevation of the  
Hercynian foundation. There are 3 diagrams 1 map and 5 So-  
viet references.

ASSOCIATION: Kompleksnaya yuzhnaya geologicheskaya ekspeditsiya AN SSSR,  
Moskva (The Joint Southern Geological Expedition of the AS  
USSR, Moscow)

SUBMITTED: March 15, 1958

1. Geology 2. Geophysics 3. Geological time--Determination

Card 2/2

BEZBORODOV, R.S.; KONYUKHOV, I.A.; KRYMGOL'TS, G.Ya.

New data on the stratigraphy of upper Liassic and middle Jurassic  
sediments in the central part of the northern slope of the  
Caucasus. Vest.LGU 14 no.6:24-37 '59. (MIRA 12:6)  
(Caucasus, Northern--Geology, Stratigraphic)

BARKOVSKAYA, K.S.; BEZBORODOV, R.S.; BROD, I.O., prof., doktor geol.-mineral. nauk; BUN'KOV, M.S.; GRINFEL'D, M.I.; ZHIVAGO, H.F.; IHRAGIMOV, D.M.; KUDRYAVTSEV, M.P.; LEONOV, G.P.; MOSKVIN, M.M.; NAZAROV, R.I.; NESMEYANOV, D.V.; NIKOLENKO, V.A.; VYSOTSKIY, I.V., nauchnyy red.; RUSAKOVA, L.Ya., vedushchiy red.; YASHCHURZHINSKAYA, A.B., tekhn.red.

[Geology of the eastern part of the northern slope of the Caucasus]  
Geologicheskoe stroenie vostochnoi chasti severnogo sklona Kavkaza.  
Pod red. I.O.Broda. Leningrad, Gos.nauchno-tekhn.isd-vo nef. i gorno-  
toplivnoi lit-ry, Leningr.otd-nie, 1960. 319 p. (Trudy Kompleksnoi  
Iuzhnoi Geologicheskoi Ekspeditsii, no.2). (MIRA 13:11)

1. AN SSSR. Kompleksnaya Yuzhnaya Geologicheskaya Ekspeditsiya, 1956-.
2. Vsesoyuznyy nauchno-issled.institut gazovoy promyshlennosti (for Zhivago, Kudryavtsev).
3. Kafedra istoricheskoy i regional'noy geologii (for Leonov, Moskvina).

(Caucasus, Northern--Geology)

BEZBORODOV, R.S.; GOFMAN, Ye.A.; RIKHTER, V.G.

Bedding of Bajocian sediments in the northwestern Caucasus.  
Izv.AN SSSR.Ser.geol. 25 no.1:94-97 Ja '60. (MIRA 13:8)

1. Institut geologii i razrabotki goryuchikh iskopaemykh AN SSSR,  
Moskva.

(Caucasus, Northern--Geology, Stratigraphic)

EVENTOV, Ya.S.; BEZBORODOV, R.S.; GRINFEL'D, M.I.; IVANOVA, A.N.; MOVSHOVICH,  
E.B.; KHABAROVA, T.N.

Data on the geology and oil and gas potentials of southern Astrakhan  
Province and adjacent areas of the Kalmytskaya A.S.S.R. Trudy

VNIGNI no.30:293-319 '61.

(MIRA 14:9)

(Astrakhan Province--Petroleum geology)

(Astrakhan Province--Gas, Natural--Geology)

(Kalmytskaya A.S.S.R.--Petroleum geology)

(Kalmytskaya A.S.S.R.--Gas, Natural--Geology)

MOISEWICH, E.B.; BELOBOROV, R.S.; VIKTOROV, D.N.; ZIL'BERMAN, M.A.;  
KOSHEVYANTS, S.B.; MELIK-PASHAYEVA, N.V.; SHAL'YKHINA, A.I.

Characteristics of the Mesozoic and Cenozoic stage of geological  
development in the Volga-Don territory. Trudy NIIneftegaza no.13:  
135-170 '65. (XTRA 18:9)

SIDOROV, B. (Moskva); GORSKIY, L. (Kiyevskaya obl.); SEMENYUK, V.  
(Astrakhan!); YEREMENKO, V. (Chuguyev); BEZBORODOV, S. (Novosibirsk)

Exchange of experience. Radio no.7:27, 58 JI '63.

(MIRA 16:7)

(No subject headings)

BEZBORODOV, S.A. Eng.

Replacement stock of assemblies for the repair of tractors  
MTS 12, no. 6, 1952

BEZBOROV, Sergei Konstantinovich.

On the edge of the world. Risunki O. Vereiskogo. Moskva TSentral'nyi komitet  
Vses. leninskogo kommunisticheskogo soiuza molodezhi - Izd-vo. letskoi lit-ry,  
1937. 510 p.

NEFEDOV, Anatoliy Aleksandrovich; GETMANETS, Veniamin Vasil'yevich;  
BEZBORODOV, T.I., red.; LEVIT, Ye.I., red. izd-va; KARASEV, A.I.,  
tekhn. red.

[Production of wire rod] Proizvodstvo katanki. Moskva,  
Metallurgisdat, 1963. 251 p. (MIRA 16:6)  
(Rolling (Metalwork))  
(Wire industry—Equipment and supplies)

Be 2 Be R e D o v, y u. m.

KARTSEV, M.A.; ALEKSANDRID, T.M.; KNYAZEV, V.D.; TAIETOV, G.I.; LEGEZO, L.S.;  
LAVRENYUK, Yu.A.; SHCHUROV, A.I.; BRUSENTOV, N.P.; KUZNETSOVA, V.P.;  
BRUK, Isaak Semenovich, red.; BEZBORODOV, Yu.M., red.; GAVRILOV,  
S.S., tekhn.red.

[The M-2 high-speed calculating machine] Bystrodeistvuiushchaia  
vychislitel'naiia mashina M-2. Moskva, Gos. izd-vo tekhniko-teoret.  
lit-ry, 1957. 228 p. (MIRA 11:3)

1. Chlen-korrespondent AN SSSR (for Bruk)  
(Electronic digital computers)

TUKACHINSKIY, Mikhail Savel'yevich, BEZBORODOV, Yu.M., red.; YERMAKOVA, Ye.A.  
tekhn.red.

[Mechanical mathematicians] Mashiny-matematiki. Moskva, Gos. izd-vo  
fiziko-matematicheskoi lit-ry, 1958. 129 p. (MIRA 11:9)  
(Calculating machines)

KARTSEV, Mikhail Aleksandrovich; BEZBORODOV, Yu.M., red.; YERMAKOVA, Ye.A.,  
tekhn. red.

[Arithmetical systems for electronic calculating machines] Arifme-  
ticheskie ustroistva elektronnykh tsifrovyykh mashin. Moskva, Gos.  
izd-vo fiziko-matematicheskoi lit-ry, 1958. 158 p. (MIRA 11:10)  
(Electronic calculating machines)

ZHOGOLEV, Yevgeniy Andreyevich; ROSLYAKOV, Gennadiy Stepanovich;  
TRIFONOV, Nikolay Pavlovich; SHURA-BURA, Mikhail Romanovich,  
prof.. Prinimali uchastiye: VASIL'YEV, V.M., sotrudnik;  
YERSHOVA, N.M., sotrudnik. BEZBORODOV, Yu.M., red.; AKHLAMOV,  
S.M., tekhn.red.

[System of standard subroutines] Sistema standartnykh pod-  
programm. Pod red. M.R.Shura-Bura. Moskva, Gos.izd-vo fiziko-  
matem.lit-ry, 1958. 230 p. (MIRA 12:3)

1. Vychislitel'nyy tsentr Moskovskogo gosudarstvennogo universi-  
teta (for Vasil'yev, Yershova).  
(Programming (Mathematics)) (Electronic calculating machines)

SMIRNOV, Aleksandr Dmitriyevich; BEZBORODOV, Yu.M., red.; GAVRILOV,  
S.S., tekhn.red.

[Modern mathematical machines] Sovremennye matematicheskie  
mashiny. Moskva, Gos.izd-vo fiziko-matem.lit-ry, 1959.  
111 p. (MIRA 12:9)  
(Electronic calculating machines)

LEBEDEV, Sergey Alekseyevich, akademik; MEL'NIKOV, Vladimir Andreyevich;  
BEZBORODOV, Yu.M., red.; AKHLAMOV, S.N., tekhn.red.

[BESM electronic digital computer] Elektronnaia tsifrovaia  
vychislitel'naya mashina BESM. Moskva, Gos.izd-vo fiziko-matem.  
lit-ry. Vol.1. [General description of the BESM digital computer  
and its operation] Obshchee opisanie BESM i metodika vypolneniia  
operatsii. 1959. 208 p. (MIRA 13:4)  
(Electronic digital computers)

GOLOVISTIKOV, Petr Petrovich; ZIMAREV, Aleksey Nikolayevich; NESLUKHOVSKIY, Kirill Sergeyevich; LEBEDEV, S.A., akademik, obshchiy red.; BEZBORODOV, Yu.M., red.; AKHLAMOV, S.N., tekhn.red.

[BESM electronic digital computer] Elektronnaia tsifrovaia vychislitel'naya mashina BESM. Moskva, Gos.izd-vo fiziko-matem.lit-ry. Vol.2. [Arithmetic and control units of the BESM digital computer] Arifmeticheskoe ustroystvo i ustroystvo upravleniya BESM. 1960. 244 p. (MIRA 13:4)

1. Institut tochnoy mekhaniki i vychislitel'noy tekhniki AN SSSR (for Golovistikov, Zimarev, Neslukhovskiy). (Electronic digital computers)

TRIFONOV, Nikolay Pavlovich, red. SHURA-BURA, Mikhail Romanovich, red.;  
BEZBORODOV, Yu.M., red.; PLAKSHE, L.Yu., tekhn. red.

[System for automating programming operations] Sistema avtomatizatsii programmirovaniia. Moskva, Gos.izd-vo fiziko-matem.lit-ry,  
1961. (MIRA 14:12)  
(Programming (Electronic computers))

YERSHOV, Andrey Petrovich, red.; BEZBORODOV, Yu.M., red.; MURASHOVA,  
N.Ya., tekhn. red.

[Automation of programming; translated articles] Avtomatiza-  
tsiia programmirovaniia; sbornik perevodov. Moskva, Gos. izd-  
vo fiziko-matem. lit-ry, 1961. 368 p. (MIRA 15:2)  
(United States--Programming (Electronic computers))

BEZBORODOV, Yu.M. (Moskva); ORLOV, V.B. (Moskva)

Machine plays chess. Mat.pros.no.6:139-164 '61.  
(Chess)(Electronic calculating machines)

(MIRA 15:3)

KRINITSKIY, N.A.; MIRONOV, G.A.; FROLOV, G.D.; LYUSTERNIK, L.A.,  
red.; YANPOL'SKIY, A.R., red.; SHUR-BUR, M.R., red.;  
BEZBORODOV, Yu.M., red.; MURASHOVA, N.Ya., tekhn. red.

[Programming] Programmirovaniye. Moskva, Fizmatgiz, 1963.  
383 p. (MIRA 16:8)  
(Programming (Electronic computers))

BEZBORODKOVA, A.

With the masters of the sea. Znan. ta pratsia no.10:20-21  
O 161. (MIRA 14:8)  
(Caspian Sea--Oil well drilling, Submarine)

BEZBORODOVA, A.; DATSIV, V.; VANYUKOV, K.

Practices of apartment-house offices in taking care of children.  
Zhil.-kom. khoz. 8 no.12:20-21 '58. (MIRA 13:1)

1.Sekretar' Chelyabinskogo gorkoma komsomola (for Bezborodova).  
2.Sekretar' Ufimskogo gorkoma komsomola (for Datsiv). 3.Predsedatel'  
roditel'skogo komiteta pri zhilishchnoy kontore No.3 Petrogradskogo  
rayona Leningrada.

(Children--Management)

BEZBORODOVA, G. [Bezborodova, H.], kand.tekhn.nauk

What does a designer think about. Znan. ta pratsia no. 11:2-3 N '60.

(Automobiles—Design and construction) (MIRA 14:4)

~~BEZBORODOVA, G.A.~~; GOLOVCHENKO, B.A.; KOVAL'SKIY, P.F.; NECHIPORENKO, Yu.I.;  
RUDNITSKIY, A., redaktor; GOLOVCHENKO, G., tekhnicheskij redaktor.

[Dump trucks] Avtomobili-samosvaly. Kiev, Gos. izd-vo tekhn. lit-ry  
USSR, 1953. 129 p. (MLR 8:2)  
(Dump trucks)

REF B-11-6

BEZBORODOVA, G.B.; HUDNITSKIY, A.I.; SAL'NIKOV, G.P., redaktor; VUYK, M., tekhnicheskiy redaktor.

[Motorist's calendar for 1955] Kalendar' avtomobilista na 1955 god.  
Kiev, Gos. i zd-vo tekhn. lit-ry USSR, 1955. 191 p. (MLRA 8:8)  
(Automobile drivers--Handbooks, manuals etc)

BEZBORODOVA, G.B., kand. tekhn. nauk, dotsent

Trends in the research on automobile roadability. Izv.  
vys. ucheb. zav.; mashinostr. no.5:145-148 '65.

(MIRA 18:11)

CHARYGIN, M.M.; REZBORODOVA, I.V.

Kelloway sediments in the northwestern Caucasus. Izv. vys.  
ucheb. zav.; geol. i razv. 1 no.7:26-31 J1 '58. (MIRA 12:8)

1. Moskovskiy neftyanoy institut im. akad. I.M. Gubkina, Kafedra  
obshchey geologii.  
(Caucasus, Northern--Geology, Stratigraphic)

3(5)

AUTHORS:

Charygin, M. M., Bezborodova, I. V.

SOV/20-125-4-53/74

TITLE:

A Contribution to the History of the Geological Development of the Interfluvial Area Pshekha - Kuban' in the North Caucasus During the Upper Jurassic (K istorii geologicheskogo razvitiya mezhdurech'ya Pshekha-Kuban' na Severnom Kavkaze v verkhney-urskoye vremya)

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol. 125, Nr 4, pp 876 - 879 (USSR)

ABSTRACT:

In the region mentioned in the title three lithological-stratigraphic complexes Callovian, Oxfordian, and Kimeridgian-Tithonian can be separated. On the strength of borings and prospecting the authors drew certain conclusions concerning the distribution of thickness and facies for each of the mentioned complexes. Maps were designed with the aid of the references 1 and 2. During the Callovian time a vast downwarping zone lay in the region of the recent monoclinial of the northern slope. The axis of the downwarping ran in a more northern direction than the recent exposures of the Upper Jurassic sediments, i. e. Subcaucasian. A zone of elevations lay in the north of the downwarping (clear around Kislovodsk and Cherkessk, but as well

Card 1/4

A Contribution to the History of the Geological Development of the Interfluvial Area Pshekha - Kuban' in the North Caucasus During the Upper Jurassic SOV/20-125-4-53/74

existing farther to the northwest). Apparently a second downwarping existed in the region of the recent Belomechetskaya synclinal, in the north of the mentioned elevations. A zone of relative elevations existed in the region of the recent Maykop projection. The western range of this elevation was complicated by a system of meridional faults (V. Ye. Khain, lecture held in Moskovskoye obshchestvo ispytateley prirody = Moscow Association of Naturalists, May 24, 1957). By means of these faults the Maikop projection was linked to the southwestern downwarping (sochleneniye = flexible link). Here the downwarping during the Callovian time had its greatest extent. From the facial point of view the Callovian sediments are almost everywhere represented by deposits of the littoral and shallow part of the sea. An exception is the southwestern downwarping in which apparently deep waters existed. The northern boundary of the Callovian sea was a region of erosion which belonged to the recent Ciscaucasia. The boundary of this continent had its vastest southward extension in the region of the Mineralovodskiy elevation. The southern boundary of the Callovian waters was an erosion region to which the entire central part of the

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A Contribution to the History of the Geological Development of the Interfluvial Area Pshekha - Kuban' in the North Caucasus During the Upper Jurassic SOV/20-125-4-53/74

Great Caucasus and the axial part of the main chain belonged (Refs 3,5). This is confirmed by the authors (Fig 1). The geotectonic plan from the Callovian time was preserved during the Oxfordian time. Only the coast lines of the waters were changed. The southern continent which was perhaps a "low" one apparently did not exercise an influence. Therefore, almost no terrigenous material came from there. It is possible that the two continental parts were joined thus isolating the waters in question from the open sea of East Caucasia (Fig 2). Thus, the rather considerable pre-Callovian movements do not lead to a change of the hitherto existing plan, compared with the Lower- and Middle Jurassic time. The aforesaid separated geotectonic elements were passed to the next stage and developed in the course of the whole later history of the region. There are 3 figures and 5 Soviet references.

Card 3/4

A Contribution to the History of the Geological Development of the Interfluvial Area Pshekha - Kuban' in the North Caucasus During the Upper Jurassic SOV/20-125-4-53/74

ASSOCIATION: Moskovskiy neftyanoy institut im. I. M. Gubkina  
(Moscow Petroleum Institute imeni I. M. Gubkin)

PRESENTED: November 15, 1958, by S. I. Mironov, Academician

SUBMITTED: November 14, 1958

Card 4/4

BEZBORODOVA, S. I.

BEZBORODOVA, S. I.: "A study of the conditions for obtaining preparations of the proteolytic enzymes from the mycelium of *Penicillium chrysogenum*." Min Health USSR. Leningrad Chemicopharmaceutical Inst. Chair of Chemistry and Technology of Antibiotics. Leningrad, 1956. (Dissertation for the Degree of Candidate in Technical Sciences.)

Source: Knizhnaya letopis' No. 28 1956 Moscow

BEZBORODOVA, S.I.

Obtaining proteolytic enzyme preparations from the mycelium of  
*Penicillium chrysogenum*. Mikrobiologiya 29 no.1:124-128 Ja-F  
'60. (MIRA 13:5)

1. Leningradskiy khimiko-farmatsevticheskiy institut.  
(PENICILLIUM metab.)  
(PROTEASES metab.)

CHAMIN, N. N., BEZBORODOVA, S.I.

Production of an amorphous and crystalline trypsin. Trudy Len.khim.-  
farm.inst. no.13:15-19 '62. (MIRA 15:10)

1. Laboratoriya enzimologii (zav. prof. Manoylov, S.Ye.) Leningrad-  
skogo khimiko-farmatsivticheskogo instituta.  
(TRYPSIN)

BEZBORODOVA, S.I.; CHAMIN, N.N.

Study of the kinetics of the hydrolysis of casein by crystalline  
trypsin applicable to a method for determining its activity.

Trudy Len.khim.-farm.inst. no.13:20-27 '62. (MIRA 15:10)

1. Kafedra biokhimii (zav. prof. S.Ye.Manoylov) Leningradskogo  
khimiko-farmatsevticheskogo instituta.

(HYDROLYSIS) (TRYPSIN) (CASEIN)

BEZBORODOVA, S.I.

Comparative study of the conditions for isolating protease from the mycelium of *Penicillium chrysogenum*. Trudy Len.khim.-farm. inst. no.13:38-44 '62. (MIRA 15:10)

1. Kafedra tekhnologii antibiotikov (zav.prof. P.A.Yakimov)  
Leningradskogo khimiko-farmatsevticheskogo instituta.  
(PENICILLIUM) (PROTEASE)

LEESIK, Kh.P.; BEZBORODOVA, S.I.

Determination of proteins in sputum by the xanthoprotein  
reaction. Lab. delo no.9:551-553 '64. (MIRA 17:12)

1. Kafedra gospi'tal'noy terapii (zaveduyushchiy - prof. P.K.  
Bulatov) i Leningradskogo meditsinskogo instituta im I.P. Pavlova  
i kafedra biokhimi (zaveduyushchiy - prof. S.Ye. Manoylov)  
Leningradskogo khimiko-farmatsevticheskogo instituta.

L 58713-65 EWT(1)/T/EEG(b)-2 P1-h IJP(c) GG

ACCESSION NR: AP5016581

UR/0363/65/001/005/0668/0674  
546.682'861-162.2

AUTHOR: Kokoshdn, V. A. ; Mirgalovskaya, M. S. ; Bezborodova, V. M.

TITLE: The degree of homogeneity of doped indium antimonide crystals

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 5, 1965, 668-674

TOPIC TAGS: indium antimonide, crystal growth, zinc doping, cadmium doping, thermo-electromotive force, Hall mobility

ABSTRACT: By using the method of thermo-emf measurements, the authors attempted to determine the inhomogeneities which may arise in indium antimonide crystals doped with acceptor impurities. It was found that indium antimonide ingots doped with zinc as well as cadmium up to concentrations of  $4 \times 10^{17} - 2 \times 10^{18} \text{ cm}^{-3}$ , prepared by the Czochralski method at  $v = (0.7-1.3) \cdot 10^{-5} \text{ m/sec}$  and  $n_1 = 0.8-1 \text{ rps}$ , may have appreciable inhomogeneities in the longitudinal and transverse distribution of the impurity. Variations in the distribution of the thermo-emf may reach + 20% in some parts of the ingots. Doping with zinc produces a more homogeneous material. An ingot containing zinc is relatively homogeneous over most of its body, and the variations in distribution  $\alpha$  are + (4-5)%. The nonuniform layered trapping of zinc and cadmium during crystallization is primarily

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ACCESSION NR: AP5016581

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helical in character, and is determined by the conditions of growth. A 50-100% increase in growth rate (to  $1.3 \times 10^{-5}$  m/sec) impairs the homogeneity of the ingots. The observed inhomogeneities significantly affect the Hall mobility. A definite correlation was observed between the change in the degree of homogeneity of p-type InSb samples with a carrier concentration of  $10^{18} \text{ cm}^{-3}$  and the deviation of the experimental value of the hole mobility from the calculated value. "The authors thank V. Ya. Smirnov and L. S. Bryzgalov for assistance in the experimental work." Orig. art. has: 6 figures and 1 table.

ASSOCIATION: Institut metallurgii im. A. A. Baykova (Institute of Metallurgy)

SUBMITTED: 27Mar54

ENCL: 00

SUB CODE: IC

NO REF SOV: 008

OTHER: 008

*dm*  
Card 2/2

1. STAROVEROV, N.A.; BEZBORODOVA, YE.S.; BIRIUKOVA, YE.S.
2. USSR (600)
4. Dairy Cattle - Feeding and Feeding Stuffs
7. Raising milk cows on rations consisting primarily of vegetables, N.A. Staroverov, YE.S. Bezborodova, YE.S. Biriukova, Sov.zootekh. 8 no. 3, 1953.
9. Monthly List of Russian Accessions, Library of Congress, APHIL 1953, Uncl.

SELEN, I. I.

Bacteriology

Observations on the presence of antibacterial substances in some tissues of the animal organism. Mikrobiol. zhur. 12 no. 4, 1950

Monthly List of Russian Accessions, Library of Congress, August, 1950. U. S. GOVERNMENT PRINTING OFFICE

ACC NR: AN7003352

SOURCE CODE: UR/9009/67/000/015/0004/0004

AUTHOR: Bezbrezhnyy, V.

ORG: none

TITLE: Study of solar radiation on the earth

SOURCE: Leningradskaya pravda, no. 15, 18 Jan 67, p. 4, col. 1-6

TOPIC TAGS: geophysics, academic institution

ABSTRACT:

In connection with the award of the Order of the Red Banner for Labor to the Main Geophysical Observatory im. A. I. Voyeykov, its deputy director, Professor N. P. Rusin, said that the observatory's mission is to conduct a thorough investigation of solar heat on the earth. The observatory is the only center in the world that is conducting such research in relation to the earth as a whole. This makes it possible to set definite standards and to estimate how the earth's climate changed, is changing, and will change. The results are of practical importance. The mean climatic norms are calculated for each locality. The observatory also does long-range forecasting.

SUB CODE: 08/ SUBM DATE: none/ ATD PRESS: 5112

Card 1/1

UDC: none

~~BEZCHASNYI~~

[The wealth of the collective farm is growing] Zrostauiut bahatstva  
kolhospu. [Kharkiv] Kharkivs'ke obl. vyd-vo, 1956. 19 p.  
(Collective farms) (MIRA 10:11)

BEZCHASTNOV, I., arkhitekter.

                      
Making full use of natural stone in construction. Stroi. mat. 4  
no.9:9-10 S '58. (MIRA 11:10)  
(Limestone)

ZINGER, Kh.M. [Zinher, Kh.M.]; BAZCHINSKIY, B.V. [Bezchyns'kyi, B.V.]

Use of polyacrylamide for the sizing of flax yarn. Lab. prom. no.3:  
65-67 J1-S '64. (MIRA 17:10)

BEZDADEA, Gheorghe, ing.

Semiautomation of the manufacture of easily fusible models  
in precision foundries. Metalurgia constr mas 14 no.4:326-  
327 Ap '62.

1. Uzina "Steagul rosu", Brasov.

BEZDEK

"Industrial refrigerating equipment" by [dpc., inz.] Zdenek Dvorak,  
[inz.] Oldrich Cervenka. Reviewed by Bezdek. Prum potravin 14 no.3:  
165-166 Mr '63.

SEEDER, B.; SKOTIVAN, B.

Printed circuits for low-voltage communication equipment.

P. 655. (SLABOPROUDY OBZOR.) (Praha, Czechoslovakia) Vol. 18, No. 10, Oct. 1957

SO: Monthly Index of East European Accession (EEAI) LC. Vol. 7, No. 5, 1958

S/137/62/000/006/082/163  
A052/A101

AUTHORS: Bezdek, Boleslav; Skřivan, Boris

TITLE: Electrolytic production of foil with a rough surface

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 6, 1962, 18 - 19, abstract  
6D115P (Chekhosl. pat. no. 97918, 15.01.61)

TEXT: An electrolytic method of producing metal foil with a rough surface is described. A rotating metal cylinder is lowered into the electrolytic bath of a corresponding composition. A thin layer of the foil forms on the surface of the cylinder. To impart roughness to the foil, it is proposed to increase the specific current density in the electrolytic bath at the end of the electrolysis. This is achieved either by lifting the rotating metal cylinder mechanically, hydraulically or pneumatically, or by decreasing the rotation speed of the cylinder.

G. Mekhed.

[Abstracter's note: Complete translation]

Card 1/1

BEZDEK, J.C.

Vitamin rich albumin concentrates obtained by biosynthesis of  
petroleum. Prum potravin 14 no.8:432-434 Ag '63.

**BEZDEK, Juraj, ins.**

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Electric safety device for frame and belt saws. Drevo 18  
no. 6:238-239 Ja '63.

1. Lignoprojekt, Bratislava.

PEZDEK, K.

Using new technique in the machine-tractor stations. p. 7 (Mechanisace  
Zemedelstvi Vol. 6, no. 1, Jan. 1956 Praha)

SO: Monthly List of East European Accession (EEA) IC, Vol. 6, no. 7, July 1957. Uncl.

BEZDEK, K.

Workers of machine-tractor stations play an important part in the success of collective farms. p. 361. (MECHANISACE ZEMEDLSTVI, Vol. 7, No. 16, Aug 1957, Praha, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 12, Dec 1957. Uncl.

OK LIDER, L.  
  
C Z E C H

Electron-Microscopic Study of the Decomposition Products  
of Undercooled Austenite. J. Bozdek and D. Ruzicka.  
(Hutnické Listy, 1954, 9, (12), 716-727). [In Czech]. The  
structures found in the decomposition products of austenite in  
a 1% C, 0.05% V Poldi tool steel in the upper and lower  
bainite zones, in the pearlite zone, and in the transition zone  
between these phases are discussed on the basis of electron  
micrographs. Optical and electron micrographs at 500, 5000,  
and 16,000 diameters are compared.--P. 7.

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Bezdek, L

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The Structure of Gray and White Cast Irons at High Temperatures. L. Bezdek and D. Růžicka. (Stalovenství, 1955, 8, (8), 225-233. (in Czech). A high-temperature microscope was used to study the primary dendritic austenite, the graphite, and the steady decomposition of the structure of gray cast irons. Observations at the temperatures used (1000° C) were facilitated by vacuum-etching the specimens. In white cast irons the changes of the pearlitic structures in austenite and the decomposition of pearlite in individual grains of austenite were studied. --r. r.

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BEZDEK, L.

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1-mgc(gd)  
/ Metallographic study of structural changes during tempering of high-carbon steel. Sl. Bezdek and D. Ruzicka. *Problems and Perspectives Czechoslov. Met. and Foundry* 1956, 90-103.—A systematic optical and electron-micrographic study of quenched 1.42%-C steel tempered in the range 50-700° is reported. Dilatometric studies, microhardness of martensite and residual austenite, and their relation to tempering conditions are reported and correlated with structure. From *J. Iron Steel Inst.* 187, 377(1957).  
jt

Bezdek, L.

✓ The Scope of Electron Reflection Microscopy in the Study  
of the Structure of Metals. A. Delong, V. Drabek, L. Bezdek,  
and D. Pálková. (Hutnické Listy, 1958, 11, (8) 355-363).  
(In Czech). The new Czechoslovak table-model electron  
microscope, adaptable to reflection microscopy with resolu-  
tions of 400Å, is used in a study of structures, mostly pearlitic,  
of carbon steels, as a function of carbon content. Cementite  
coagulation and other phenomena were observed, and are  
illustrated by 35 micrographs.—P. 2.

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14 FEB 77  
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Possibilities of using electron emission microscopy in the investigation of metal structures. Armin Delong, Vladimir Drabek (Lab. Electron. Microsc., Czechoslovak Acad. Sci., Prague), Ladislav Bradek, and Dalibor Hrdlička. *Nature* 255, 300-304 (1975). Electron emission microscopy is discussed in connection with the surface activation of metallographic specimens. By means of the microscopy the influence of surface deformation of the specimen on the growth of oxides on this layer was investigated in relation to the temp. and the time, and the possibility was found of using the direct exam. of the carbide part from the specimen. The influence of chemically etching the surface of the metallographic specimen on the course of the emission was also investigated. The structures of oxide films formed at 750-900° during surface activation of the specimen with H<sub>2</sub> were examined. Petr Schneider

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Metallographic Study of Structural Changes During Tempering of 1.25 Carbon Steel, S. L. Bragg and J. R. Bragg, *Principles and Perspectives of Neutronomic Metallurgy*, Plenum, 1955, 90-100). A systematic optical and electron micrographic study of quenched 1.25% C steel tempered in the range 50°-700° C is reported. Dilatometric studies, hardness of martensite and residual austenite and their relation to tempering conditions are reported and correlated with structure.

CZECHOSLOVAKIA/Electronics - Electron Microscopy

H-4

Abs Jour : Ref Zhur - Fizika, No 10, 1958, No 23314

Author : \*Dolong Armin, \*Drahos Vladimir, \*\*Bezdek Ladislav, \*\*Ruzicka Dalibor

Inst : \*Laboratory for Electron Optics, CSAB, Brno; \*\*VTAMZ Laboratory on the Study of Properties of Metals CSAB, Brno, Czechoslovakia

Title : Possibility of Application of Electron Emission Microscopy for the Study of the Structure of Metals.

Orig Pub : Hutnicke listy, 1957, 12, No 3, 206-215

Abstract : Description of an attachment to the Czechoslovak electron microscope, which makes it possible to use the latter as an emission microscope. With the aid of this attachment the authors, using the thermoelectronic emission of metallographic specimens activated with berium (by depositing this metal in vacuum by evaporation), have investigated the structure of carbon steels and also certain processes connected with the changes in the structure.

Card : 1/1

High- and low-temperature microscopy. Přemysl Ryš  
Ladislav Beránek, Karel Čiha, Daňoš Růžička, and Jiří  
Skarek (Czechoslov. akad. věd, Prague). *Rozprawy Česko-*  
*slov. akad. věd, Řada tech. věd 67*, No. 3, 67 pp. (1957) (Eng-  
lish summary).—A new low-temp. (to  $-196^{\circ}$ ) and high-  
temp. (to  $600^{\circ}$ ) microscope for examn. of metals is de-  
scribed. The principles of detn. of the structure of metals  
and alloys by thermic etching and especially the thermic  
microscopy of steel was discussed. 37 references.

Alexej B. Dolgikh

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CZECHOSLOVAKIA/Solid State Physics - Phase Transitions in Solids E-6

Abs Jour : Ref Zhur - Fizika, No 11, 1958, No 25228

Author : Rys Franyzl, Bezdek Ladislav, Ciha Karol, Ruzicka Dalibor,  
Skarok Jiri

Inst : Not Given

Title : Investigation of Metallic Structures at High and Low Temperatures.

Orig Pub : Acta techn. (Ceskosl.), 1958, 3, No 1, 58-83

Abstract : A description is given of the apparatus and of a procedure from metallographic investigation of metals and alloys at high ( $\sim 600^{\circ}\text{C}$ ) and low ( $-196^{\circ}\text{C}$ ) temperatures. The high-temperature microscope makes it possible to carry out direct observation of the specimen at high temperatures in vacuum or in a protective atmosphere. Heating of specimens is carried out by passage of electric current, or also by heat transfer from the furnace (eight specimens can be heated simultaneously). In the former case the rate of heating is  $\sim 1500^{\circ}/\text{minute}$ , in the second it is  $\sim 300^{\circ}/\text{minute}$ ; with an accuracy of  $\pm 0.5\%$ .

Card : 1/2

CZECHOSLOVAKIA/Solid State Physics - Phase Transitions in Solids E-6

Abs Jour : Ref Zhur - Fizika, No 12, 1958, No 27496

Author : Rys Premysl, Bezdok Ladislav, Ciha Karel, Ruzicka Dalibor,  
Skarek Jiri

Inst : Not Given

Title : Investigation of the Structure of Metals at High and Low  
Temperatures. 3-4.

Orig Pub : Acta techn. (Czechosl.), 1958, 3, No 2, 85-120

Abstract : Continuation of a previous work (Referat Zhur Fizika, 1958,  
No 11, 25228). In this part a procedure is discussed for  
the manufacture of specimens with thermal etching and results  
of an investigation at high temperatures. A large number  
of microphotographs are included.

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